

Mobile Application Development Guidelines

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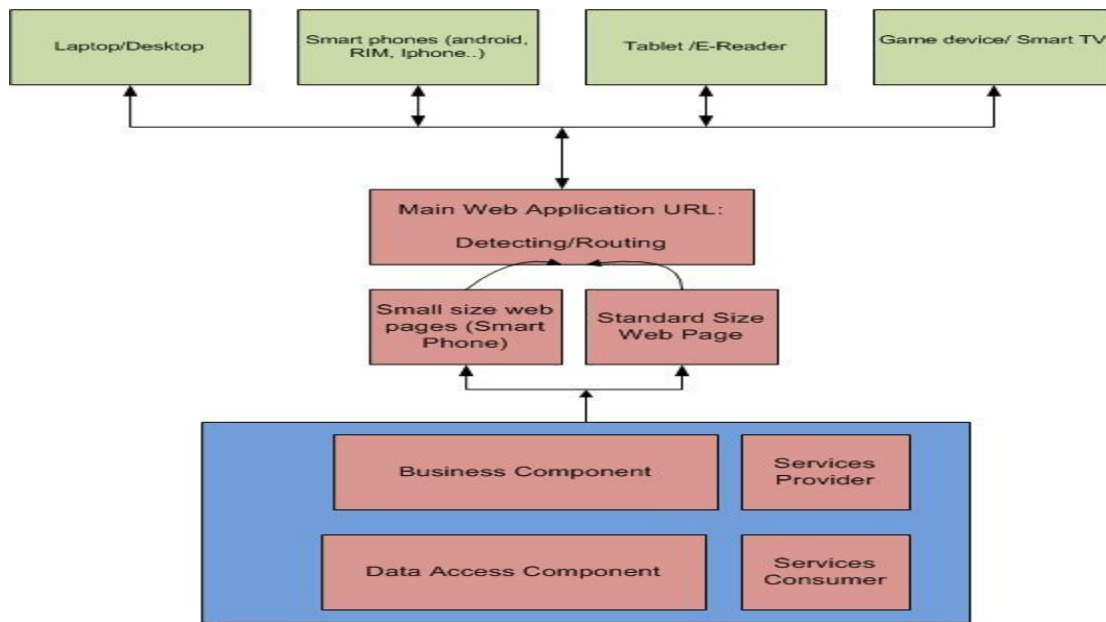
Background information: Mobile devices with Internet access have become popular. As these devices are getting more powerful and the computing power is shifted to the cloud-based platform, the users will gradually begin using them for most of their communication and application computing due to their portability and mobility.

Unlike the desktop or laptop PC where Microsoft Windows OS has been dominating more than 90% of the market, the mobile device is diverse and segmented by several mobile operating systems such as IOS (iphone), Android, RIM, Web OS, Window Phone...etc. The mobile devices are also available in many different shapes and forms: from handheld phone, e-reader, and portable-game console to tablet size.

Most of the applications built for these devices are native applications centric, which are emphasized and advertised strongly by vendors. However, building native application to run for all of these devices is a very difficult task for small IT organization since each OS requires different development toolset and skills. Another approach to build applications is to build them as mobile-optimized web applications in which all devices can run via the device internet browser.

Guidelines and architecture approach for building mobile application:

- When there is a need to build an application for mobile device, the developers need to build it as mobile web application unless this approach cannot meet the business requirements.
- Mobile web application should be part of the main web application for all devices (desktop/laptop/handheld), where all users only need to visit one web application address.
- Mobile web application should avoid creating separate business tier or data tier. It should leverage the common components for these tiers as in the below diagram.



- Use the agency approved mobile-detection module to detect device when users are visiting the website. This ensures the same detection behavior across the agency applications.
- Mobile web application should conform to the agency mobile web UI standard and [existing application development guidelines/standards.](#)
- Native applications:
 - Only build native application (non-web) for agency-approved device and for Ecology staff.
 - Avoid building native application, unless the application requires the device specific features such as camera functions, location sensors other native device API.

Document History

Date	Version	Editor	Change
4-14-2011	Draft	Son Tran	1 st draft
4-18-2011	1.0	Son Tran	SAT approved